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COTTON WAREHOUSING  
BY TEXAS COOPERATIVE GINS

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and  
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COOPERATIVE RESEARCH AND SERVICE DIVISION

Miscellaneous Report No. 45

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# COTTON WAREHOUSING BY TEXAS COOPERATIVE GINS

by

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and

Clarence E. Pike, Junior Agricultural Economist  
Cooperative Research and Service Division

## CONTENTS

	Page
Location of warehouses operated by cooperative gins	2
Ownership and control	4
Warehouses and equipment	4
Storage rates and charges	7
Warehouse income and expense	9
Distribution of earnings	22
Summary and conclusions	26
Supplement A	30

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Texas cooperative gin associations began warehousing cotton in the fall of 1937. The attractive storage and handling charges allowed on Government loan cotton during the 4 seasons immediately preceding and the prospects for an unusually large crop on the South Plains of Texas that season led 4 associations to build cotton warehouses to be operated as a side line to their cooperative ginning business. The results were so satisfactory that 16 additional associations built or purchased warehouses for the storage of the 1938-39 cotton crop. Many of these associations paid for their warehouses with the earnings of their first season or first 2 seasons. Very little cotton of the 1939-40 crop went into storage because during that season the current sale prices were more attractive than the loan values. However, the associations carried over some cotton from the 1938 crop into the 1940-41 season, and this gave them some income. With the coming of the 1940-41 season, cotton again moved into the loan. But by that time storage rates had been cut and fees for handling services largely eliminated. Despite this fact, 7 additional associations built or purchased warehouses for the storage of the 1940-41 crop, bringing the total to 23 cooperative gin associations which operated 33 warehouse buildings, all of which are located at or near the gin plants. During the 1940-41 season these associations stored about 42,000 bales of cotton. 1/

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1/ In addition to cotton warehouses operated by Texas cooperative gins, there are other warehouses and compress facilities operated by cooperatives in various parts of the South which bring the total storage capacity to approximately 250,000 bales.

Of the 33 warehouses operated by cooperative gins, 5 were purchased as existing facilities, 27 were built by the associations, and 1 was leased. Cost of the buildings and the land totaled about \$55,160 and averaged about \$3,065 per association. Figures on purchases of existing warehouse facilities for the 3 associations whose warehouse costs could be separated from total plant costs indicated an average price of about \$3,165 per warehouse.

#### LOCATION OF WAREHOUSES OPERATED BY COOPERATIVE GINS

This study includes all cooperative gins in Texas that were known to be operating cotton warehouse facilities as a side-line activity. Figure 1 shows the location of the 23 Texas gin associations which operated the 33 warehouses. Twenty-eight of these warehouses were located in the Plains area of west Texas, and the remaining 5 in east Texas. All were situated in country communities or small towns that varied in population from 25 to 8,000 persons and averaged 1,697 persons. Approximately 75 percent had a population of less than 1,500 persons.

At the time the data were gathered (April and May 1941) one association was operating 4 warehouses, another was operating 3 warehouses, 5 were each operating 2 warehouses, and 17 were operating 1 warehouse each.

In practically every case the farmer members of the gin associations, who were usually located within a 6-mile radius of the gin, furnished the entire patronage of the warehouses. In a few locations a relatively small quantity of cotton ginned elsewhere was stored in these warehouses. However, in several cases these warehouses were not large enough to store all Government loan cotton belonging to association members and the cooperative gin manager made arrangements to have members' cotton stored elsewhere. The storage records were kept in the gin office.

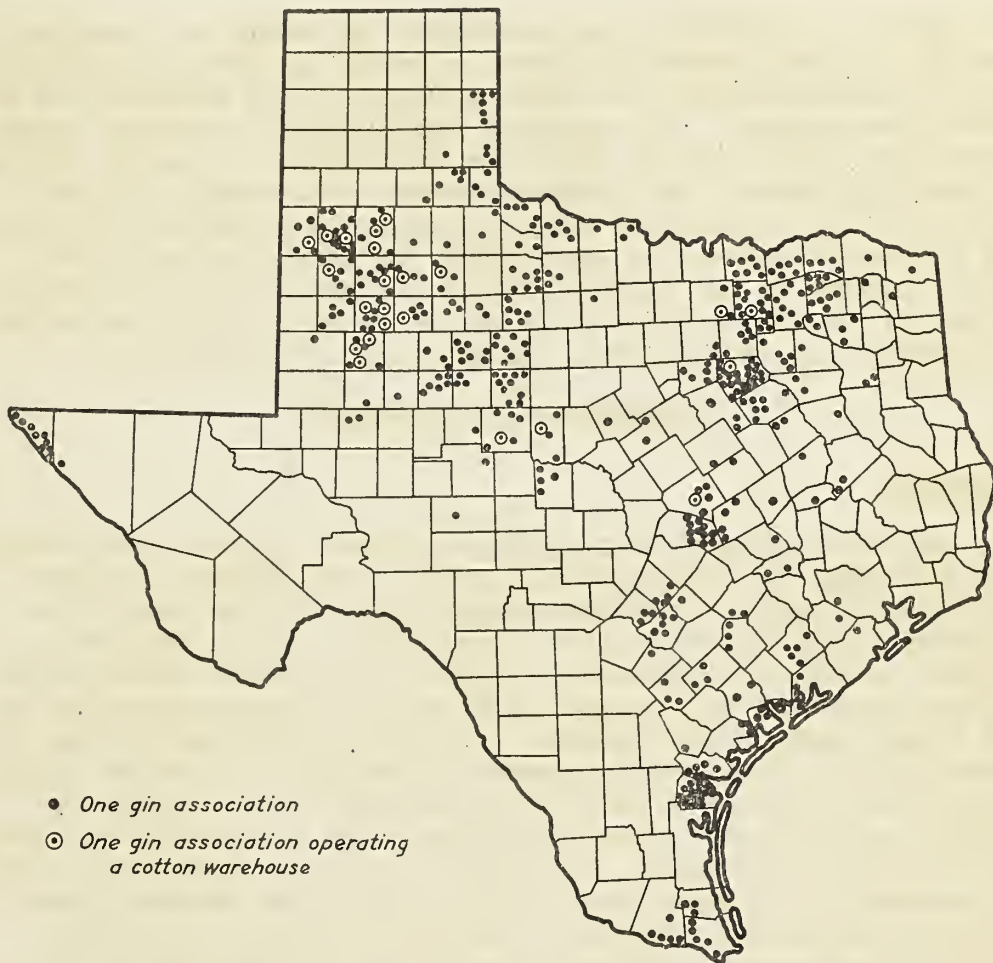
Of the 23 towns or communities having cooperative warehouses, 9 had one or more competitive cotton warehouses. The estimated average capacity of all competitive warehouses in these towns was 25,367 bales, compared with an estimated average capacity of 2,278 bales for cooperative warehouses. This gives the cooperative warehouses an average of 8.1 percent of the total estimated cotton storage capacity in towns having both cooperative and privately owned warehouses. At 3 locations the associations had single competitors with average storage capacities of 4,800 bales. On the average, however, the association usually had 3 competitors, whose warehouses had an average storage capacity of 9,000 bales.

Of the total number of associations, 4 had warehouses in towns where compresses were located; the remaining 19 were, on an average,  $16\frac{1}{2}$  miles from the nearest compress.



FIGURE I

Farmers Cooperative Gin Associations in Texas  
June 1941



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## OWNERSHIP AND CONTROL

The gin associations financed the construction or purchase of the warehouses out of their own funds or through loans obtained from the Farm Credit Administration or other lending agencies. They operated them as departments of their own business, and in no instances as separate subsidiary enterprises. The gin associations were, therefore, responsible for the success or the failure of the warehouses, and took the risks incident to such undertakings.

The gin associations are controlled by boards of directors, usually of 5 to 7 members selected annually by their memberships. The directors determine the broad policies of the associations and select the managers. The managers supervise the warehouse operations along with those of the other departments - usually ginning and wrapping cotton, and handling cotton, cottonseed, and farm supplies. During the busy ginning season, as a general rule, someone is hired to assist in supervising the warehouse operations. This assistant to the manager handles the labor needed to get the cotton in and out of storage and helps the association bookkeeper to maintain the necessary bale-location and other records.

## WAREHOUSES AND EQUIPMENT

### Buildings

All cotton warehouse facilities operated by the cooperative gins are small as cotton warehouses go in the South. They were built specifically to provide storage space for the loan cotton produced by the members of the associations. It is doubtful whether association directors responsible for their construction had any idea that their associations would engage permanently in the cotton warehousing business. In fact, cotton warehousing was looked upon as a temporary activity affording only passing savings and services to members while the Government loan programs continued, and while the rates and charges were at satisfactory levels for small warehouses. The opinion was often expressed during the course of the study that, if and when cotton storage became unprofitable, or the loans were discontinued, the association would own warehouses that could be used to advantage for many other purposes. Thus the associations would be better off than they might have been had they not gone into the warehousing business.

This attitude of cooperative gin officials influenced the type of structure built. The usual practice was to erect a building that would serve to protect the cotton at the least possible cost. As a result all but 2 of the 33 warehouses included in this study are of wood-frame construction covered with corrugated galvanized sheet iron. One of the two exceptions is of stone with a metal roof, the other has a wood frame, wood siding, and a metal roof.



The types of construction used may best be understood by reference to figure 2. Of the 33 warehouses, 9 are of the so-called round or barrel type. They rise in an arc from the ground supported within at intervals on a laminated wood frame like hoops of a barrel except that they are on the inside. Dimensions of these warehouses on the average are 50 feet in width, 160 feet in length, and 25 feet at the highest point. Twenty-four associations used the more common type of building with upright sides and gable roof. They average approximately 160 feet in length, 60 feet in width, and in height 13 feet at the eaves and 20 feet at the peak. Variations from these average figures were very small.

Generally the buildings were constructed on concrete foundations and had dirt floors. Wood, concrete, and crushed-limestone floors were occasionally used. Ordinarily, warehouses without wood floors stacked their cotton on wood runners or skids to prevent deterioration from dampness below.

Figures on the cost of these warehouses were obtainable only for those warehouses that were built during the 4 years 1937-40. Their cost averaged about \$2,043. Of this average amount, \$193 went for land and \$1,850 for materials and labor. The construction of 16 of these warehouses was financed through the Houston Bank for Cooperatives.

The cost of warehouse facilities in terms of per bale storage capacity depends first on the cost of construction and secondly on the number of bales that are stored in the given space. Workable warehouse capacity, calculated on the basis of height and square feet of floor space, is given in a formula prepared by the United States Department of Agriculture. 2/

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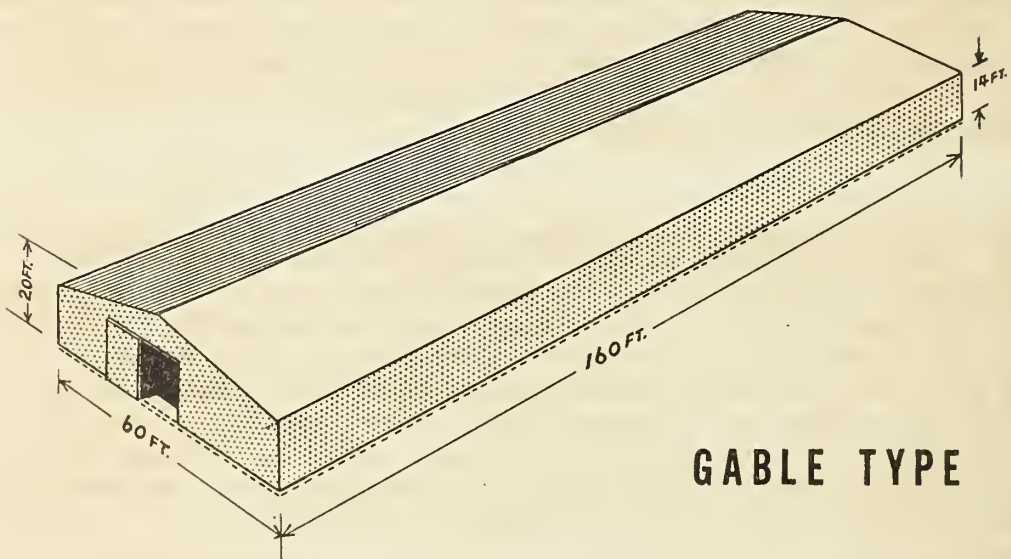
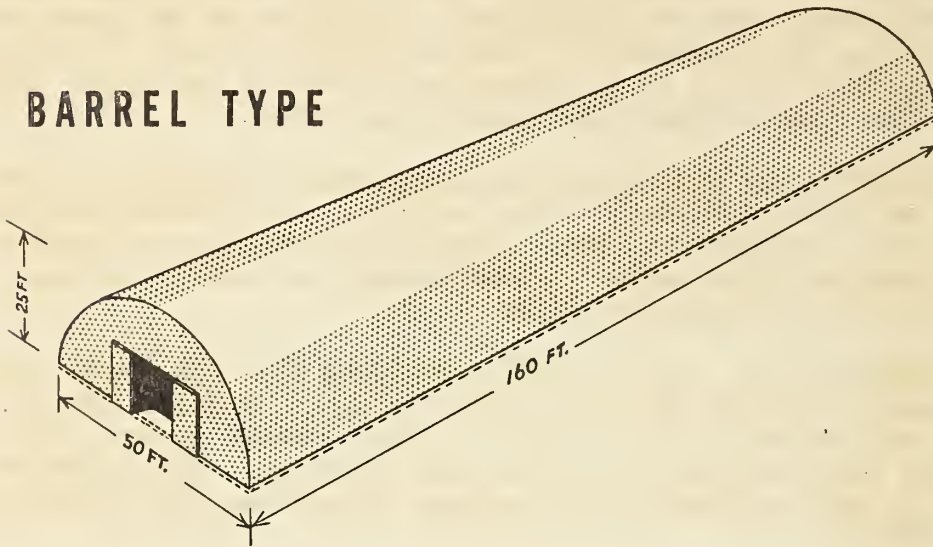
2/ The Agricultural Marketing Service of the United States Department of Agriculture has a formula that uses height and square feet of floor space for determining warehouse capacity. This formula is worked out on the basis of cotton stacked in sections of two rows each, an aisle between the sections wide enough to get out a bale of cotton, and a center aisle wide enough for a truck to enter for loading and unloading cotton. After determining the number of square feet of floor space in a warehouse, its capacity in number of gin bales can be determined as follows:

1/14	x sq. ft. of floor space = no. of bales stacked 1 high on end
1/8	" " " " " " " " " " " 2 " " "
5/28	" " " " " " " " " " " 3 " " "
3/14	" " " " " " " " " " " 4 " " "
1/14	" " " " " " " " " " " 2 " laid flat
3/32	" " " " " " " " " " " 3 " " "
1/8	" " " " " " " " " " " 4 " " "
5/32	" " " " " " " " " " " 5 " " "
3/16	" " " " " " " " " " " 6 " " "

FIGURE 2

## TYPICAL SMALL COTTON WAREHOUSES

### BARREL TYPE



### GABLE TYPE

Scale -  $\frac{1}{2}'' = 20'$

Actually practically all the associations studied stored considerably more cotton in their respective warehouses than this workable capacity would suggest. In fact the average workable capacity according to the Department formula was 1,087 bales, but the average of the largest volume stored at one time was 1,806 bales.

When capacity was figured by the United States Department of Agriculture formula, the average cost per bale of storage capacity for all warehouses built during the 1937-40 period ranged from \$0.48 to \$4.19 and averaged \$1.88. The average actual cost for the same warehouses ranged from \$0.43 to \$1.86 and averaged \$1.07 when the largest volume actually stored was considered capacity.

The associations included in this study had a warehouse capacity, as figured by the United States Department of Agriculture formula, of 71.8 percent of their 1940-41 ginnings, but a capacity estimated by them of 124.3 percent of their 1940-41 ginnings.

#### Equipment

Warehouses operated by the Texas cooperative gins had little equipment other than trucks, bale scales, and bale-raising equipment. The trucks were generally also used in connection with the ginning activities. Scales were of the beam type, and were purchased at an average cost of \$65. Only 6 associations owned bale-stacking equipment of any kind. Of these, 3 used a block and tackle, 2 a tractor with hoist, and 1 a crane. Lack of bale-stacking equipment undoubtedly increased the cost of handling the cotton.

#### STORAGE RATES AND CHARGES

Practically all the cotton stored in the 33 warehouses studied came under the provisions of the Government loan. Storage rates and service charges were therefore fixed by the regulations of the Commodity Credit Corporation and were not left to the discretion of the association. Table 1 shows these rates for the crop years 1933-34 to 1941-42. Up to July 1939 a monthly storage charge of 25 cents per bale was made for cotton during its first year in a warehouse; after its first year rates were usually materially lower.

Except during the period from November 1940 to the beginning of the 1941-42 season, attractive handling charges have been allowed in all seasons since 1933. The following excerpt taken from a memorandum of July 23, 1941, by the Commodity Credit Corporation explains the corporation's general policy regarding service charges:



Table 1. - Maximum monthly per bale storage rates allowed by the Commodity Credit Corporation, 1933-34 to 1941-42 1/

Season loan was made	Period							
	To 7-31-34	8-1-34 to 7-31-35	8-1-35 to 7-31-36	8-1-36 to 7-31-37	8-1-37 to 7-31-38	8-1-38 to 7-31-39	8-1-39 to 10-31-39	11-1-39 to 7-31-40
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
1933-34	25	15	--	--	--	--	--	--
1934-35	--	25	15	18	18	18	15	12½
1935-36	--	--	25	15	--	--	--	--
1936-37								
1937-38	--	--	--	--		No loan available during the 1936-37 season		
1938-39	--	--	--	25	25	18	15	12½
1939-40	--	--	--	--	--	--	--	12½
1940-41	--	--	--	--	--	--	--	15
1941-42	--	--	--	--	--	--	--	17½

1/ During most of this period service charges in addition to these storage charges were allowed. For details, see pp. 5 to 7.

Source: Commodity Credit Corporation Records.

"The published tariff schedule for services (other than storage) was allowed by the Corporation until the 1939-40 program, except that the lien against the cotton could not exceed 25 cents per bale if the Corporation took possession. No charges allowed during 1939-40 and 1940-41 program for lending agency, agency preparing documents, or agency storing cotton. This regulation was specifically called to the attention of lending agencies and warehouses last November 15."

Local conditions and customs in handling cotton have made standardization of services and charges impossible. Therefore, it is difficult to make any statement regarding service charges made by cooperative warehouses during the period covered by this study. Theoretically, these charges covered all services performed from the time the bale entered the warehouse door until it was removed from the warehouse. These services included principally receiving, weighing, and sampling the cotton; issuing an individual bale receipt; stacking the bale in the warehouse, and later delivering it to the warehouse door. In actual practice, however, whether these service charges were more or less than 25 cents per bale, they usually included drayage from the gin to the warehouse and in a few instances delivery to the rail platform. A few associations also included yardage and the preparation of loan papers.

During the early years of operation, attractive storage rates for small warehouses plus satisfactory service charges, together with lower cotton values and long storage periods brought in attractive warehouse incomes from these associations. During the 1940-41 season, however, monthly storage rates were cut to 15 cents per bale and service charges eliminated; consequently the operation of small warehouses on a sound financial basis was very difficult. During the 1941-42 season conditions were better with respect to charges in that monthly storage rates were raised to 17 1/2 cents per bale. A service charge of 25 cents per bale was allowed, and a small fee for the preparation of loan papers was required. However, this increase in gross income was largely offset by the higher insurance expense which was the result of higher cotton prices.

This presentation of storage rates and fees for services is in no way an attempt to express an opinion as to whether such charges are too high or too low so far as the cotton warehouse industry as a whole is concerned. It relates only to the problems of the small, unprotected cotton warehouse.

#### WAREHOUSE INCOME AND EXPENSE

##### Expenses

Although there are necessarily many different items of expense involved in the operation of small cotton warehouses, two items - labor and insurance - stand out as being especially important.



In fact, they are so important that unless they are kept definitely under control and in some instances lowered materially, the future of the small "unprotected" warehouse will not be too bright.

Labor.-- Labor is used largely for receiving and stacking cotton and later for locating and moving it from the warehouse. This is nearly always done by a crew of men with man-propelled hand trucks. Stacking and unstacking is done by hand and is a tedious and nearly always expensive process.

In most cases it was impossible to get accurate figures on the labor cost of moving cotton into and out of the warehouse, because the labor costs in too many instances were not properly allocated to the different departments. Reasonably accurate figures were obtained, however, from several associations and were assumed to be fairly representative. For those warehouses the costs were approximately 30 cents per bale for each of these two operations.

The several cotton-stacking systems used account very largely for the differences in expenditures for common labor. Twelve managers reported that their associations stacked all cotton with the flat side of the bale down, whereas 9 indicated that they stacked all cotton with the bales standing on end, and 2 stated that they stacked cotton both flat and on end. Those stacking cotton with the flat side down usually piled the bales 4 high but sometimes stacked them as much as 8 high. For purposes of locating cotton, the various parts of the warehouse were numbered or lettered into sections which were usually 2 bales wide, and extended from the center aisle to the wall in either direction. In several cases no aisles were left between two sections. However, a number of associations followed the same or a system very similar to the stacking plan recommended by the Agricultural Marketing Service of the United States Department of Agriculture. The plan provides for a center aisle wide enough to permit the entrance of a wagon or truck for loading and unloading cotton, and on each side sections of 2-bale rows each with aisles between the sections wide enough to allow passage of a single bale. The plan recommends further that cotton be stacked on end and never more than 2 bales high as one man with a hand truck can get a bale out when so stacked. If the cotton is stacked with the flat side down, it usually requires a crew to get out a bale. However, where a dirt floor and wood skids or runners are used, stacking the bales on end, 2 high is not entirely satisfactory so far as handling the bales is concerned.

The original stacking plan was often abandoned by the manager under pressure of circumstances as soon as the warehouse was filled to its workable capacity. Cotton going into storage after that was stacked both in the lateral and center aisles, 4 to 8 bales high. This led to considerable confusion and expense, especially when the

cotton started to move out a few bales at a time. Almost without exception association managers said they had difficulty in getting out shipments because their warehouses were too full.

Many associations probably had put more cotton in their warehouses than they otherwise might have done; first, because they expected the cotton to stay in storage for a long period of time; second, because they expected the out movement would take place all at one time as it had in several previous seasons. However, the 1940-41 crop started moving out of storage in February and by July the warehouses were practically empty. The average bale was in storage only about 6 months. During that time the cotton had to be got out of storage, often from widely scattered locations in the warehouse, a few bales at a time. When cotton was stacked solidly or nearly so, the expense of moving a few scattered bales at a time proved to be extremely high in spite of the fact that most associations kept rather good records of bale location.

When the volume to be stored exceeded the workable capacity of the warehouse, managers were faced with the difficulty of deciding which of two policies to follow: To leave aisles and cut down storage income, or to fill aisles and increase storage income but at the same time increase labor expense. If the second alternative was chosen, the additional revenue and more was often spent in getting the cotton out of storage.

Many of the associations were able to fit their warehousing into their ginning business to the extent of using the same labor for both. In some instances when ginning was slack, the gin crew stacked cotton in the warehouse. However, ginning operations during the bulk of the season required the full-time attention of the gin crew so that a special crew had to be hired for warehouse operations. Although there is a slight lag between the time of ginning and the time that cotton moves into the warehouses (table 2 and fig. 3), this lag is not great enough to free much gin labor for work in the warehouse. In the off season, the associations for the most part hired temporary labor.

Table 2.-Percentage comparison of ginnings during specified periods and movement of cotton into west Texas cooperative warehouses 1938-39 and 1940-41 1/

Period	Season			
	1938-39		1940-41	
	Total <u>2/</u> ginnings <u>Percent</u>	Cotton going into cooperative warehouses <u>Percent</u>	Total ginnings <u>Percent</u>	Cotton going into cooperative warehouses <u>Percent</u>
Before Sept. 1	0.2	0.0	0.1	0.0
September	15.2	5.7	14.6	9.9
October	46.8	41.9	48.8	51.6
November	31.4	37.0	20.4	31.1
After Nov. 30	6.3	15.3	16.1	7.3
Total	99.9	99.9	100.0	99.9

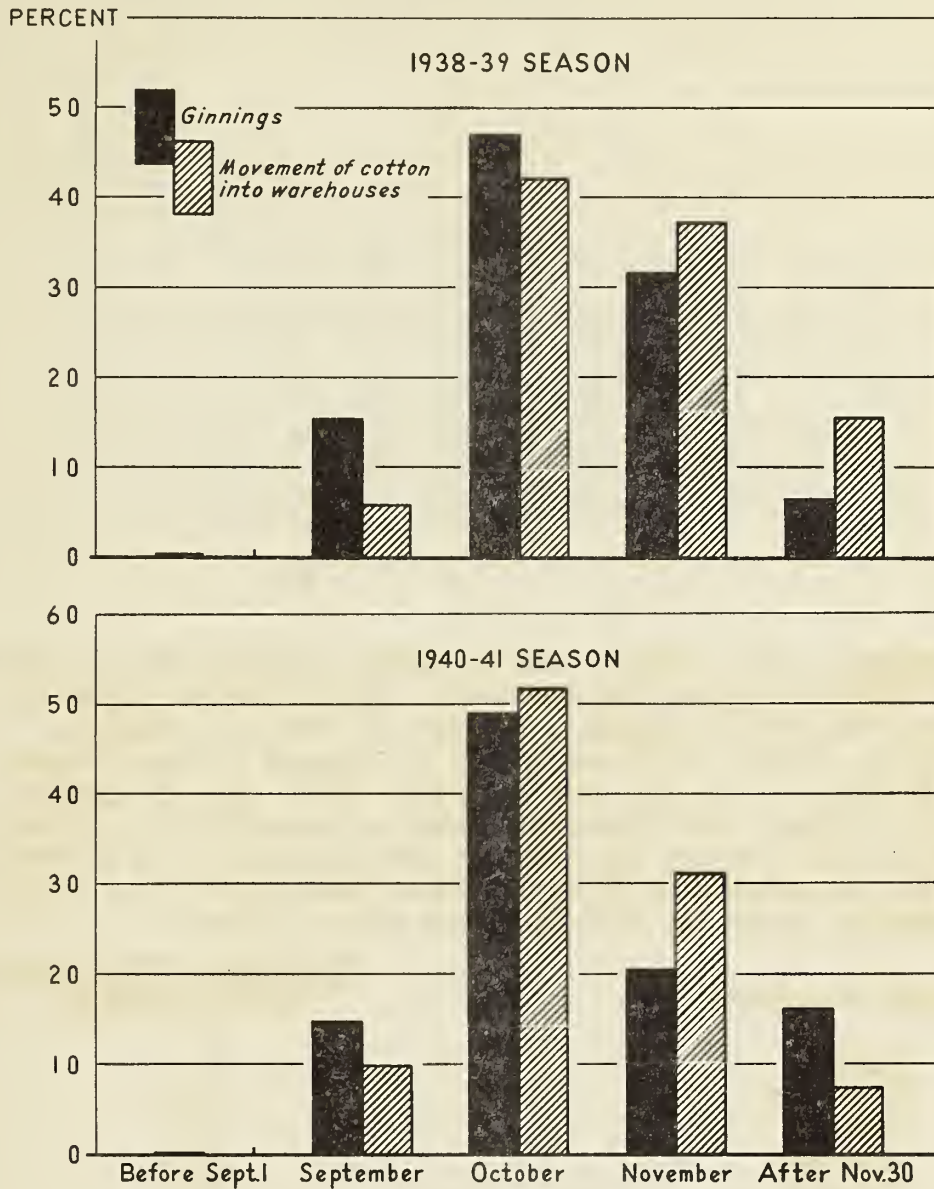
1/ No loan cotton in 1939-40.

2/ In west Texas counties, where 28 cooperative warehouses were located.



FIGURE 3

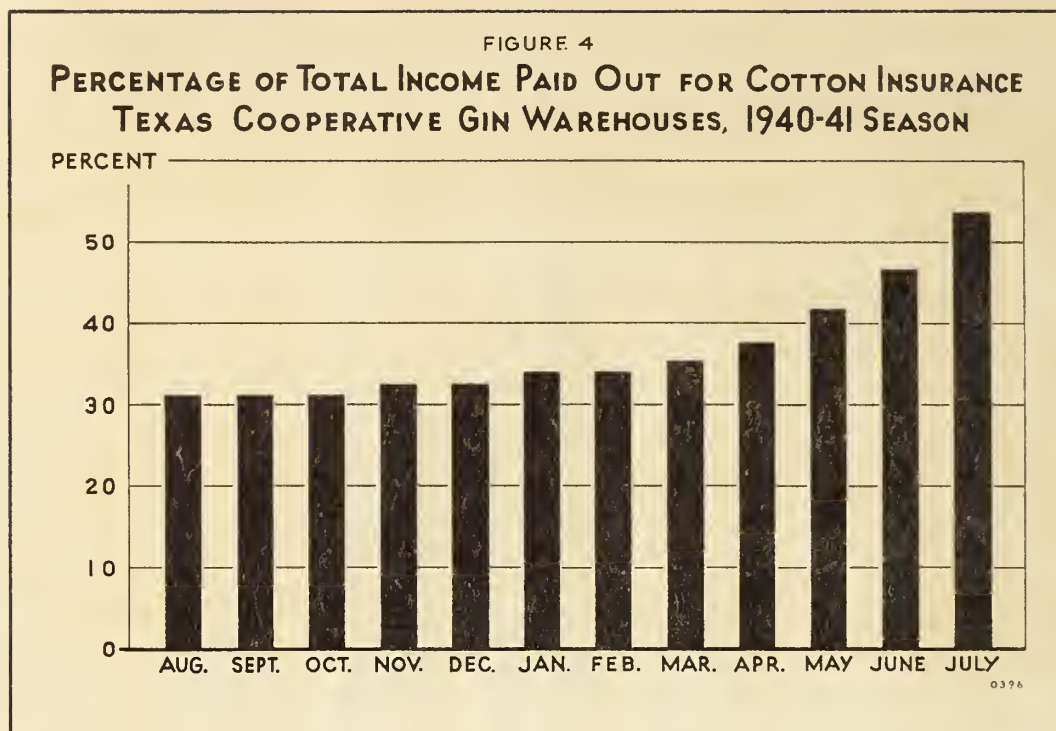
PERCENTAGE COMPARISON OF GINNINGS DURING SPECIFIED PERIODS\* AND MOVEMENT OF COTTON INTO WEST TEXAS COOPERATIVE WAREHOUSES, 1938-39 AND 1940-41†



\* In counties where cooperative warehouses are located

† No loan cotton in 1939-40

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Insurance.— The largest item of expense incurred in the operation of these warehouses was insurance. Of the various types of insurance that must be carried, the cost of fire and windstorm insurance on cotton stored was by far the largest and most important. In fact, it was the most important single item of expense (fig. 4). Compared with insurance rates on commodities in other sections of the country, the rates on cotton appear to be extremely high. The percentages of total warehouse income paid out for cotton insurance during the 1940-41 season are as follows:

Month of payment	Percentage insurance is of total income
August	31.1
September	31.1
October	31.1
November	32.5
December	32.5
January	33.9
February	33.9
March	35.3
April	37.5
May	41.7
June	46.6
July	53.7



Numerous factors influence the insurance rate paid on cotton stored in these or other warehouses. Among the more obvious are the material from which the building is constructed, the type of floor, the location with respect to other fire hazards, whether or not a sprinkler system is used, the fire records of the town in which the warehouse is located, the type of warehouse and city fire-fighting equipment, the local water system, if any, the number of bales stored per fire compartment, the presence or absence of a night watchman, and many other factors of greater or less importance.

The annual cotton insurance rates paid by these warehouses varied from \$0.21 to \$1.97 and averaged \$1.27 per \$100 of cotton in storage. In April 1941, when this study was begun, cotton was selling at about \$60 per bale. At that price level the lowest monthly insurance cost for cotton in these cooperative warehouses was 1.1 cents a bale, the highest 9.9 cents, the average was approximately 6.3 cents a bale. After that time the market rose rapidly until in September 1941 cotton was selling at around \$85 per bale. The monthly cotton insurance charge at that value increases to approximately 9 cents a bale, an increase of about 50 percent. The cooperative with the lowest rate paid 1.8 cents a bale at an \$85 valuation and the highest paid 14.1 cents a bale (table 3).

Table 3.-Rates and monthly cotton insurance costs per bale at different per bale values, Texas cooperative warehouses

Warehouse code num- ber <u>1</u> /	Ins. rate: per \$100 value of cotton	Monthly insurance cost per bale at different per bale values						
		\$50.00	\$60.00	\$70.00	\$80.00	\$90.00	\$100.00	
		value	value	value	value	value	value	
	Dollars	Cents	Cents	Cents	Cents	Cents	Cents	
1	0.21	0.88	1.05	1.23	1.40	1.58	1.75	
2a	.87	3.63	4.35	5.08	5.80	6.53	7.25	
b	.87	3.63	4.35	5.08	5.80	6.53	7.25	
c	.87	3.63	4.35	5.08	5.80	6.53	7.25	
d	.87	3.63	4.35	5.08	5.80	6.53	7.25	
3a	1.00	4.17	5.00	5.83	6.67	7.50	8.33	
b	1.00	4.17	5.00	5.83	6.67	7.50	8.33	
4a	1.00	4.17	5.00	5.83	6.67	7.50	8.33	
b	1.00	4.17	5.00	5.83	6.67	7.50	8.33	
5a	1.11	4.63	5.55	6.48	7.40	8.33	9.25	
b	1.11	4.63	5.55	6.48	7.40	8.33	9.25	
6a	1.15	4.79	5.75	6.71	7.67	8.62	9.58	
b	1.15	4.79	5.75	6.71	7.67	8.62	9.58	
7	1.19	4.96	5.95	6.94	7.93	8.93	9.92	
8	1.37	5.71	6.85	7.99	9.13	10.28	11.42	
9	1.47	6.13	7.37	8.59	9.82	11.04	12.27	
10	1.49	6.21	7.45	8.69	9.93	11.18	12.42	
11a	1.49	6.21	7.45	8.69	9.93	11.18	12.42	
b	1.49	6.21	7.45	8.69	9.93	11.18	12.42	
c	1.49	6.21	7.45	8.69	9.93	11.18	12.42	
12a	1.51	6.29	7.55	8.81	10.07	11.32	12.58	
b	1.51	6.29	7.55	8.81	10.07	11.32	12.58	
13	1.53	6.38	7.65	8.93	10.20	11.48	12.75	
14	1.58	6.58	7.90	9.22	10.53	11.85	13.17	
15	1.71	7.13	8.55	9.98	11.40	12.83	14.25	
16	1.71	7.13	8.55	9.98	11.40	12.83	14.25	
17	1.71	7.13	8.55	9.98	11.40	12.83	14.25	
18	1.97	8.21	9.85	11.49	13.13	14.78	16.42	
19			No insurance data available					
20			"	"	"	"		
21			"	"	"	"		
22			"	"	"	"		
23			"	"	"	"		
Average <u>2</u> /	1.27	5.28	6.33	7.38	8.44	9.49	10.55	

1/ The letters refer to separate warehouse buildings.

2/ Simple average.

This extremely high cost of insurance on cotton appears to be the most serious problem small cooperative warehouses have to face. It becomes an increasingly serious problem to the warehouses when cotton is selling at high prices because income from storage is determined on a per bale basis, but insurance costs are determined on the basis of the market value of the cotton. At the close of business each day the warehouses are required by the insurance companies to report the number of bales of cotton in storage, together with their weight, grade and staple. Although these reports are often not turned in until the end of the week, they are made up daily and the cost of insurance is determined for each day by determining the spot market value of the cotton in storage and applying the insurance rate thereto.

All 33 warehouses studied are located in rural communities or small towns, which means that for the most part they have very little in the way of required fire protection. In fact, about half of the towns or communities have neither a city water system nor a fire department of any kind. Under these conditions fire insurance rates are necessarily much higher than they are in larger towns and cities that have good city water systems and well-equipped and well-trained fire departments.

Most of these warehouses are frame ironclad buildings of rather inexpensive construction and, except for 2 or 3 buildings, they are not equipped with automatic sprinkler systems. All have the standard number of water barrels and buckets for which they get some insurance credit. Because most of the warehouses are not equipped with sprinkler systems, the fire insurance rates they must pay are much higher than they otherwise would be, especially since only a few engaged the services of a night watchman.

Other types of insurance are also important items of expense. The average warehouse building was insured for \$1,834 against fire and windstorm losses. In most instances the rate paid for fire and tornado insurance on the warehouse buildings was the same as the rate paid on the stored cotton. In those instances where this was not true the rate on the building was generally higher than the rate on the cotton stored therein.

In addition to insurance on the warehouse building and the cotton stored therein, Texas gin associations are required by law to carry employees compensation. It is purchased at the rate of \$6.91 per \$100 of payroll. The associations must also carry public liability insurance.



## Income

Cotton warehouses ordinarily have three sources of income: (1) Storage of cotton, (2) service charges, and (3) sale of loose cotton. Since practically all cotton stored during recent years was pledged as collateral for loans farmers received from the Commodity Credit Corporation, the individual cooperative warehouse has had little or no control over the rates or charges levied for storage and other services. The gross storage income of the warehouse is determined by multiplying the monthly storage charge per bale by the number of bales stored. To this amount must be added the income from the sale of loose cotton and from the various service charges. Each service charge is usually made on a per bale basis.

Most of the cotton that was stored in these warehouses during the 1937-38 and 1938-39 seasons did not move out until the spring of 1940 (table 4 and fig. 5). The storage of this cotton was, therefore, quite profitable from the point of view of the associations. To offset this advantage, however, no cotton went into the loan during the 1939-40 season, and since practically all business of these warehouses has been with loan cotton, they had no income that year except on the cotton stored in previous seasons.

When monthly storage rates were 25 cents per bale and service charges were allowed, the small cooperative warehouse was a very profitable enterprise. In fact, most of the warehouses built in 1937 and 1938 were reported to have been paid for in 1 year of operation. However, when monthly storage rates were reduced to 15 cents per bale and warehouses were no longer allowed to make receiving and delivery charges, the continued successful operation of this type of enterprise became uncertain. During the 1940-41 season cotton stayed in storage an average of about 6 months. Therefore, the average gross income from storage from each bale of cotton was approximately 90 cents. If it is assumed that cotton in that area was worth an average of about \$50 per bale during the season, the total cost of insurance for a bale of cotton in storage for 6 months would average approximately 33 cents. This would leave 47 cents to cover all other expenses. But when cotton increased in value to almost \$85 per bale, as it did in the fall of 1941, the average cost of insurance per bale would be approximately 54 cents. This would leave only 36 cents, or 40 percent of the gross income, to cover all other expenses. Many warehouses were spending more than this to get the cotton moved into and out of the warehouse. Under these conditions warehouse operations could only result in a loss. Unfortunately, specific details as to net incomes or losses from warehouse operations were so intermingled with the accounts of other activities of the association that their use was not deemed practical.

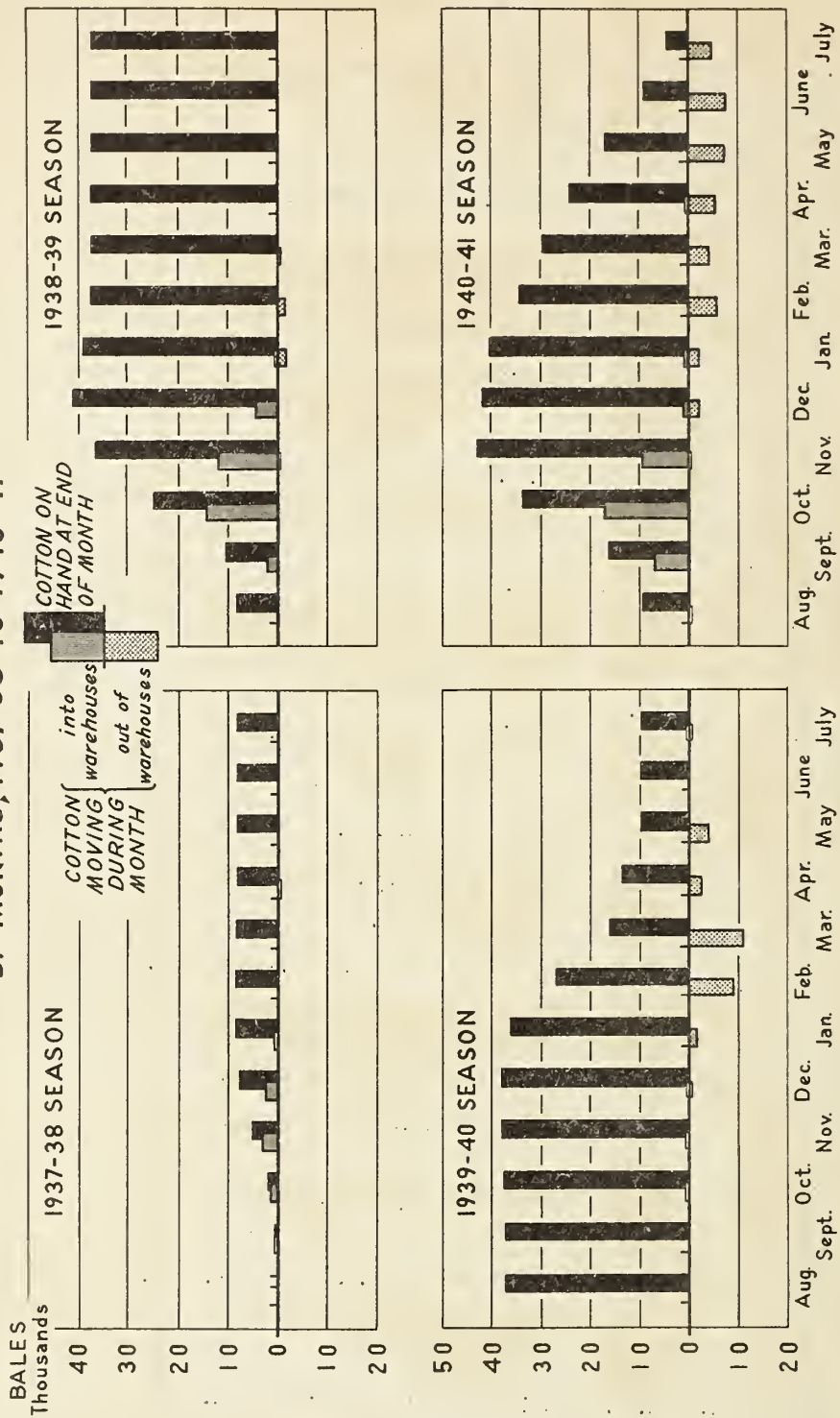
Table 4.-Cotton in storage and movement into and out of Texas cooperative gin warehouses, by months, 1937-38 to 1940-41

Month	Season											
	1937-38			1938-39			1939-40			1940-41		
	Movement		On hand	Movement		On hand	Movement		On hand	Movement		On hand
	In	Out	end of month	In	Out	end of month	In	Out	end of month	In	Out	end of month
	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales	Bales
August	0	0	0	0	0	8,193	0	0	37,446	0	394	9,488
September	500	0	500	2,252	0	10,445	0	13	37,433	7,035	51	16,472
October	1,500	0	2,000	14,389	92	24,742	325	5	37,753	17,242	80	33,634
November	3,200	0	5,200	12,035	164	36,613	225	0	37,978	9,538	180	42,992
December	2,532	0	7,732	4,443	43	41,013	100	129	37,949	1,235	2,367	41,860
January	761	0	8,493	153	1,875	39,291	0	1,623	36,326	740	2,245	40,355
February	0	0	8,493	6	1,750	37,547	0	9,101	27,225	2	6,055	34,302
March	0	0	8,493	49	150	37,446	0	10,897	16,328	0	4,365	29,937
April	0	300	8,193	0	0	37,446	0	2,577	13,751	100	5,659	24,378
May	0	0	8,193	0	0	37,446	14	3,852	9,913	0	7,356	17,022
June	0	0	8,193	0	0	37,446	0	7	9,906	29	7,881	9,170
July	0	0	8,193	0	0	37,446	100	124	9,882	0	4,835	4,335



FIGURE 5

# COTTON IN STORAGE, AND MOVEMENT INTO AND OUT OF TEXAS COOPERATIVE WAREHOUSES BY MONTHS, 1937-38 TO 1940-41



The rates announced by the Commodity Credit Corporation for the 1941-42 season are somewhat higher than those of the past season. The maximum storage rates for this season are 17 1/2 cents per bale per month. In addition, warehouses may collect from producers a service charge for receiving, sampling, and delivering of not in excess of 25 cents per bale, and a charge for reweighing and resampling of 10 cents per bale for each service. If we assume that cotton will stay in storage for about the same length of time that it did during the 1940-41 season, we can estimate the gross income and the proportion of it that will go for insurance. Six months at 17 1/2 cents per bale per month will give a gross income from storage of \$1.05. To this will be added the service charge of 25 cents per bale making a total gross income of \$1.30 per bale. If the average value of cotton should be \$85 per bale the total expense for insurance on a bale of cotton would be approximately 54 cents. This would leave 76 cents to cover all other expenses. Under these conditions small warehouses may be able to operate successfully if their business is managed properly, but even under the best conditions of management the margin of saving to the farmer will on an average probably be rather narrow. However, the more efficient warehouses which operate economically will be able to make savings under existing rates. These savings are usually distributed directly to patrons of the warehouse as patronage dividends.

In addition to possible savings that can be made in storage and service charges, there are a number of indirect advantages which may accrue to farmers who are members of local cooperative gin associations that operate warehouses whether they be small or large. In the first place, use of the cooperative warehouse reduces to a minimum the trouble and the expense to which members are put in receiving Government loans on their cotton. The member can put his cotton into a loan without the trouble and the expense of moving it to be stored elsewhere. Furthermore, the association's staff can make out loan papers for its members at cost.

Another important service members receive from these associations is assistance in the sale of loan equities. Gin managers are usually in a position to know much more about the value of cotton than is the average farmer. The contacts managers of warehouses have with the cotton trade places them in a position to be especially helpful in advising farmers on the value of their equities. When a member wishes to sell his loan equity, the manager should be able to advise him as to whether the price offered is satisfactory at that particular time, quality considered. However the decision as to when to sell should be strictly up to the farmer.

Sales by gin managers also have their disadvantages. Although the manager is in a better position to sell cotton intelligently than is the average member, his contacts and experience are limited to the local market. A larger organization with broader contacts should be able to do a better job than the average gin manager.

If groups of gin associations would combine their efforts in selling their members' cotton, the results should be better than could be obtained by either the members as individuals or by the local cooperative gin managers.

Managers feel that in selling loan equities, the farmer having his cotton stored locally or nearby with practically no charge other than storage, has an advantage over the farmer whose cotton is stored at a more distant point. In addition, many buyers prefer to make their purchases on actual samples rather than on descriptions. If buyers prefer this method, samples can be obtained easily and quickly because the cotton is stored close at hand.

### DISTRIBUTION OF EARNINGS

In many instances cooperative gins made no attempt to keep separate accounts of the warehouse portion of the association's business. In these associations the board of directors considers the warehouse operations as a side-line service provided for all members. Furthermore, since the warehouse was financed by the association, the directors often felt that net earnings of the warehouse operations should be the general property of the association rather than that of the individual members who patronized the warehouse. It was impossible for these associations to pay separate patronage dividends on the amount of business each member did with the various departments. The more progressive associations departmentalized their operations so that net earnings or losses from ginning and wrapping, cottonseed, cotton, farm supplies, and warehousing were set up separately. These net earnings or losses were then distributed to members on the basis of the amount of business each had done with each department. Distributions for the year's warehouse operations were usually made in one of the three following ways: (1) Number of bales stored, (2) number of months the bale was in storage, and (3) number of dollars worth of business the member had done with the warehouse department.

In associations following the departmentalized plan some of the association's general overhead and other fixed expenses can be charged against the warehouse operation, the amount being determined by some more or less arbitrary system. There are several ways of calculating the amounts to be paid; namely, by number of bales stored, by bale months, or by dollars of business. Some difference of opinion exists as to which method is most desirable. The basis upon which the dividend is calculated has a direct influence on the amount each member or patron receives.

#### Number of Bales Stored

The most common and least desirable basis of distributing net earnings from warehouse operations to members and patrons was the number of bales stored during the season. Although this method is simple, it is inequitable because it disregards the length of time



the bale is in storage and, consequently, the amount of business the member or patron has transacted in terms of dollars and cents paid to the association for warehouse storage and service charges. To illustrate the point, John Smith has 100 bales in storage for 1 month and pays \$42.50 in warehouse storage and service charges and receives a patronage dividend of \$13.33. This is exactly the same dividend as the association returns to Tom Brown, who has 100 bales in storage for 6 months and pays \$130 in warehouse charges, and to Jim Jones, who has 100 bales in storage for 12 months and pays \$235 in warehouse charges. It is unjust to consider that a bale in storage only 1 month should receive as large a share of the net income as another that might be in storage during the entire season, particularly since the member receives more service during the longer storage period and because it is the most profitable to the association. It is doubtful whether this method should ever be used as a basis for determining the patronage dividends of warehouse patrons (table 5).

#### Bale Month

If the number of months a bale is in storage is the basis for computing dividends, the association determines at the end of the season the total number of months all bales have been in storage. This figure is then divided into the total net income available for distribution as patronage dividend. This gives the amount of the dividend that is to be allocated to each member for each month each of his bales was in storage. This bale-month figure multiplied by the number of months each individual member's or patron's bale was in storage during the season gives the total amount of the patronage dividend each should receive in cash or credit for each bale for that season.

When this method is used, a member or patron who had a bale in storage for 1 month would receive only  $1/6$  as much as another whose bale was in storage for 6 months, and only  $1/12$  as much as the member or patron whose bale was stored for the entire year. For example, John Smith, who had 100 bales in storage for 1 month and paid \$42.50 in warehouse charges to the association, would receive a patronage dividend of \$2; Tom Brown, who had 100 bales in storage for 6 months and paid \$130 in warehouse charges, would receive a patronage dividend of \$12; Jim Jones, who had 100 bales in storage for 12 months and paid \$235 in warehouse charges, would receive a patronage dividend of \$24 (table 5).

#### Dollars of Business

The payment of dividends calculated on the basis of the number of dollars' worth of business done with the association, unlike payments under the other two methods, takes into consideration the cost of services supplemental to actual storage, such as handling

Table 5.-Warehouse patronage dividends according to three different methods of calculation

Fictitious name of patron	Number of bales in storage	Average months in storage	Total bale months	Amount of charges paid 2/				Per bale 3/			Basis of dividend 1/				Bale month 4/			Dollar of business 5/		
				Storage		Service		Total	Amount per bale	Dollars	Total per member	Dollars	Amount per bale month	Dollars	Total per member	Dollars	Amount per dollar of business	Dollars	Total per member	Dollars
				Dollars	Dollars	Dollars	Dollars													
John Smith	100	1	100	17.50	25.00		42.50		.1333		13.33		.02		2.00		.0941		4.00	
Tom Brown	100	6	600	105.00	25.00		130.00		.1333		13.33		.02		12.00		.0941		12.23	
Jim Jones	100	12	1,200	210.00	25.00		235.00		.1333		13.33		.02		24.00		.0941		22.12	
Frank Green	200	11	2,200	385.00	50.00		435.00		.1333		26.67		.02		44.00		.0941		40.93	
John Doe	50	5	250	43.75	12.50		56.25		.1333		6.67		.02		5.00		.0941		5.29	
Robert Roe	75	5	375	65.63	18.75		84.38		.1333		10.00		.02		7.50		.0941		7.94	
Jane Cole	75	4	300	52.50	18.75		71.25		.1333		10.00		.02		6.00		.0941		6.70	
Harry White	150	8	1,200	210.00	37.50		247.50		.1333		20.00		.02		24.00		.0941		23.29	
Dick Harris	300	9	2,700	472.50	75.00		547.50		.1333		40.00		.02		54.00		.0941		51.52	
Fete Coe	300	3	900	157.50	75.00		232.50		.1333		40.00		.02		18.00		.0941		21.88	
Joe Miller	25	4	100	17.50	6.25		23.75		.1333		3.33		.02		2.00		.0941		2.23	
Bill Evans	25	3	75	13.12	6.25		19.37		.1333		3.33		.02		1.50		.0941		1.82	
Totals	1,500		10,000	1,750.00	375.00		2,125.00				199.99				200.00				199.95	

- 1/ Assume that the net income from warehouse operation was \$200, arrived at as follows: \$2,125 (gross warehouse income) - 1,925 (total warehouse expenses) = \$200 (net warehouse income)
- 2/ Monthly storage charges calculated at 17 1/2 cents a bale and service charges at 25 cents per bale (used in 1941-42 season).
- 3/ Calculations for dividends on per bale basis: \$200 (net income) + 1,500 (bales) = \$1,700 (total dividend per bale of cotton stored).
- 4/ Calculations for dividends on bale-month basis: \$200 (net income) + 10,000 (bale months) = \$10,200 (total dividend per bale month).
- 5/ Calculations for dividends on dollar of business basis: \$200 (net income) + \$2,125 (total charges paid warehouse) = \$2,325 (total dividend per dollar of business done with the warehouse).



and receiving cotton, sampling, and weighing. To arrive at the amount of dividend to be paid on each dollar's worth of business done by each member necessitates several calculations. First, the total dollars' worth of business done by all members is divided into the total net income available for distribution as patronage dividends. This gives the amount of dividend to be paid on each dollar's worth of business done. Next, by multiplying this amount by the number of dollars' worth of business done by each member, the amount of dividend each receives is determined. If the dollar method is followed, the member or patron will receive a larger patronage dividend for short-time storage than if the dividend is calculated on a bale-month basis. This is true because the per bale service charge remains the same irrespective of the length of time a bale stays in storage, and therefore a member who has a bale in storage for only 1 month receives the same dividend from the service charge as a member who has a bale in storage for 6 months or even for the entire year. To illustrate, John Smith, who had 100 bales in storage for 1 month and paid \$42.50 in storage and service charges to the association, receives a patronage dividend of \$4, while Tom Brown, who had 100 bales in storage for 6 months and paid \$130 in warehouse charges, receives a dividend of \$12.23, and Jim Jones, who had 100 bales in storage for 12 months and paid \$235 in warehouse charges, receives \$22.12 (table 5).

The figures presented in table 5 may be compared in another way to show how a particular individual's dividend may differ, depending on the method of its calculation. If dividends are distributed on a straight per bale basis, John Smith would receive \$13.33 as a patronage dividend at the end of the season for 100 bales stored for 1 month. On a bale-month basis, his dividend for the month's storage would drop to \$2. On the basis of the number of dollars' worth of business done with the association, it would be \$4 for the month. Cotton belonging to Tom Brown was in storage for 6 months during the season. It happens that the amount of his patronage dividend therefrom would be practically the same, regardless of the method of calculation. Jim Jones stored his cotton for 12 months. On a straight per bale method, Jim receives only \$13.33; on a bale-month basis, he receives \$24; and on the basis of number of dollars' worth of business done he receives \$22.12. In other words, Jim would be discriminated against if the straight per bale method were used; but there would be comparatively little difference in the amounts of dividend he would receive under the other two methods of calculating dividends.

Which of the two methods, by bale month or by dollar of business, should be used is open to question. The dollar of business method favors the member who leaves his cotton in storage for a relatively short period of time; the bale-month method, the member who leaves his cotton in storage for a relatively long time. Were it not for service charges, the results by the two methods would be

identical. Since service charges are always a complicating factor, the dollar of business is probably the most satisfactory method, everything considered.

Probably the most equitable method of determining patronage dividends for warehouse patrons is to separate the warehouse business into a storage and a service department, and pay separate dividends in each department. If this method is used it makes no difference whether dividends are paid on a per bale month or dollar of business basis, because the results are exactly the same, regardless of the length of time that a bale is in storage. However, this method makes necessary an arbitrary allocation of certain expenses within the warehouse operation to the two departments, storage and service. These allocations will require more time and expense and it is doubtful whether in many instances the results would justify the extra trouble and the expense of additional accounting records.

#### SUMMARY AND CONCLUSIONS

Cooperative gin associations went into the cotton warehouse business beginning about 1937, because storage rates and service charges from the beginning of the Government loan program in 1933 until late in 1939 made the operation of small cotton warehouses very profitable. Also, in the fall of 1937 there were prospects of a record cotton crop. Some 23 associations are now engaged in cotton warehousing as a side-line operation.

During their first two seasons, 1937-38 and 1938-39, these operations proved to be an outstanding financial success. But very little cotton went into the Government loan during the 1939-40 season, and except for the storage of cotton of previous seasons the warehouses stood empty. In the fall of 1940, cotton prices were again favorable for loan operations, but monthly storage rates on loan cotton had been reduced from 25 cents to 15 cents a bale and all service charges eliminated. At this reduced rate the possibility of successful operation of small cotton warehouses became questionable. <sup>3/</sup> Monthly storage rates for the 1941-42 season have been increased to 17 1/2 cents a bale and service charges again restored to 25 cents a bale.

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<sup>3/</sup> No attempt has been made to determine whether rates are too high or too low for the cotton-warehousing industry in general. The observations herein apply only to small unprotected cotton warehouses. If their operation is unprofitable, over an extended period, as compared to other types of warehouses they should be abandoned.



In spite of the improved rates and service charges, small cotton warehouses are still faced with two major problems they must overcome if they are to operate successfully and make savings in storage charges for their farmer members and patrons: (1) The high cost involved in getting cotton into and out of the warehouse, and (2) the high cost of insurance on cotton stored.

The high cost of moving cotton into and from the warehouse is in large measure the result of stacking too much cotton in the space available. Largely because loan cotton had previously stayed in storage for extended periods, a majority of the managers were inclined to fill their warehouses too full. Efficient operation in the quick turn-overs that came was impossible. Bale locations were used, but specific bales could only be moved after moving large quantities of other cotton. Costs for removing small lots from the warehouse when it was filled above workable capacity were sometimes as much as \$25 per bale.

Adequate financial data are not available for most of the associations, because the associations do not segregate the accounts of the various activities and because they do not keep separate labor and other warehouse records. Records available indicate a cost of approximately 30 cents per bale to place cotton in storage, and another of 30 cents per bale to take it out. These extremely high costs can be eliminated by cutting down the amount of cotton stored in the warehouses.

The second problem of small cooperative cotton warehouses is the extremely high cost of insurance on the cotton they store. The warehouses are all located in rural communities or small towns with little or no fire protection. In addition, they are not equipped with sprinkler systems. They cannot, therefore, get the low insurance rates that adequate fire protection brings. On an average, these associations paid approximately \$1.27 for every \$100 of cotton insured. This means that at a value of \$50 per bale the monthly insurance charge on a bale of cotton was approximately 5.3 cents. With cotton selling at \$85 per bale the insurance charge each month increased to approximately 9 cents per bale. This is more than 50 percent of the amount the associations received for storage of loan cotton. Therefore, it is highly desirable that some way be found to materially reduce insurance expense. If warehouse operations result in a loss to the associations, obviously something must be done.

The easiest course of procedure in getting rid of the excessive cost of insurance might be to abandon these warehouses, which were so profitable when storage rates were higher and insurance costs lower than at present. But cooperative cotton warehousing seems to have a place in the cotton marketing picture and farmers are not

willing to abandon it without a struggle. Several other courses of procedure are open for future consideration. Some of the suggestions already made are as follows:

1. Associations operating warehouses might organize a mutual insurance cooperative to handle risks of this type on a cost basis. The difficulty with this plan is that at the present time there are not enough cooperative warehouses to spread the risk sufficiently. With cotton at about \$85 a bale a complete loss on cotton stored in one of the cooperative gin warehouses stacked to workable capacity would amount to from \$75,000 to \$150,000. Obviously, 23 associations could not bear the risk of incurring any such losses. Hence, unless reinsurance in substantial amounts can be obtained at moderate rates, this plan does not seem very promising.

2. Associations might pool their efforts to bargain as a group with an existing insurance company for lower rates than now prevail. They could use the argument that the cooperative cotton warehouses to date have exceptionally satisfactory records. During the 4 years of operation the warehouses have had only four small fire and windstorm losses totaling \$1,538. It is estimated that during this same period they have paid out for fire and windstorm insurance premiums on cotton and warehouse buildings approximately \$55,000. Special arrangements for limitations of the quantity of cotton stored in one warehouse and other factors that tend to cut the risk of excessive losses to a minimum might be considered.

3. In connection with the storage of Government-loan cotton, it has been suggested that a south-wide indemnity plan be set up. Under this plan certain deductions would be made from each grower's cotton to create a huge pool to take care of possible cotton fire and windstorm losses. The same results could be accomplished by adding stipulated interest charges on loan cotton not insured. This plan places insurance or its substitute on a cost basis with the risks spread over the entire Cotton Belt.

But if no solution can yet be found to the insurance problems of small warehouses, the following courses of action might be given consideration: (1) Farmers might revert to the practice of farm storage of their cotton; provided they obtain insurance rates which, with due consideration of the greater risks in cotton, are not out of line with those now prevailing in the Midwest on farm-stored Government-loan wheat and corn. At present, insurance rates on farm-stored grain are only a fraction of those cotton growers must pay on farm-stored cotton. (2) Groups of cooperative gin associations might pool their resources to build or purchase large, modern, fireproof warehouses equipped with sprinkler systems. To obtain the most advantageous insurance rates, these warehouses should be located in towns with adequate fire protection. Cooperative warehouses of this type should be in a position to furnish storage and insurance service at a satisfactory cost under practically any conceivable competitive condition.



If the second course of action is preferred, and since it is impossible under present conditions to purchase the galvanized sheet metal needed for the construction of the larger type warehouse suggested, the individual gin associations might dismantle their small warehouses and use the sheet metal and structural materials therefrom for the construction of a larger warehouse or larger warehouses. Calculations indicate that the amount of sheet metal which could be recovered from the small warehouses within a reasonable radius of Lubbock, for example, would be sufficient to build a warehouse with a capacity of from 40,000 to 50,000 bales. Much structural material could also be recovered for reuse. Whether or not a sprinkler system and the accompanying water storage tanks will be available during the present emergency is uncertain. In this connection it should be remembered that if insurance rates are to be kept at reasonable levels, either new or used sprinkler equipment will have to be installed. In the case of water storage tanks, however, if new or used facilities are not available, it might still be possible to keep insurance rates at nominal levels by using existing sources of water supply.

In the area covered by the Plains Cooperative Oil Mill of Lubbock such a project might be sponsored successfully. This oil mill association, which is a federation of cooperative gins, might organize a subsidiary corporation to have as its function the cooperative warehousing, compression, and selling of the cotton of its member gin associations. The number, size, and location of the warehouses to be built could only be determined after a survey of the territory. This survey should include, among other things, an analysis of the volume and location of cotton available for storage, length of time cotton is normally stored in the area, probable demand for compression and other services, and the direction in which cotton normally moves to market.

The financing of such a project should offer no serious difficulties. The small warehouses owned by the gins could be appraised for dismantling purposes, with the appraisal figures thus obtained representing the individual gin association's investment in the new warehouse association. The funds needed for labor and for the purchase of extra materials for the construction of the new facilities could be obtained through loans and from cash investments by member gin associations that have no warehouses to be dismantled.

## SUPPLEMENT A

Since this study was originally completed, Commodity Credit Corporation has announced two additional storage contracts which may be used by warehousemen storing Government-owned and pooled cotton. Under both of these new contracts the warehouseman only pays for cotton fire insurance on values up to \$50 per bale. The rate he pays for \$100 of value, however, remains the same. Fire risks on that part of the value exceeding \$50 per bale is assumed by C.C.C. Thus on cotton valued at \$80 per bale the warehouseman would pay the costs of fire insurance on a \$50 valuation and C.C.C. would be responsible in case of fire loss for the other \$30 per bale. Other differences between the old storage contract and the two new contracts and their relative effects on the warehouseman's cotton fire insurance costs and storage revenue after the cost of fire insurance is deducted are described for each of the contracts below.

### October 14, 1941 Storage Contract

This contract, announced on October 14, 1941, applies only to the storage of Government-owned and 1938, 1939, and 1940 pooled loan cotton. The only warehousemen who can use this contract are those storing the above cotton for C.C.C. at a rate of  $12\frac{1}{2}$  cents per flat bale per month or those storing cotton at special rates. Warehousemen storing compressed cotton for  $12\frac{1}{2}$  cents per bale per month can, however, also use this contract by reducing storage charges on such cotton to 10 cents per bale per month.

Under this contract the warehouseman has to carry cotton fire insurance on Government-owned and pooled cotton on market value or \$50 per bale, whichever is less. All fire risks on per bale values exceeding the first \$50 are carried by C.C.C. This insurance arrangement only applies during the time that C.C.C. holds the warehouse receipts, and after C.C.C. transfers the cotton by sale or exchange, the warehouseman is responsible for insurance at full market value.

### January 7, 1942 Storage Contract

This contract, announced on January 7, 1942, applies to Government-owned and pooled loan cotton stored for C.C.C. at storage rates of 15 cents per bale per month for flat cotton, and  $12\frac{1}{2}$  cents per bale per month for compressed cotton. Under this contract each warehouseman's cotton fire insurance costs, based on a \$50 per bale value, are deducted by C.C.C. from the above storage rates before making returns to the warehouseman. In other words C.C.C. assumes full responsibility at current market value for all cotton fire losses but only charges the warehouseman for the amount of insurance he would ordinarily have to pay on a \$50 per bale value.

The costs to the warehouseman of carrying cotton fire insurance and the storage revenue remaining after insurance costs are deducted under the various storage contracts are shown in Table 1 for various insurance rates and different per bale values.

Table 1. - Cotton Fire Insurance Costs and Storage Revenue after Insurance Costs to Warehouses by Type of Commodity Credit Corporation Storage Contract for Various Values of Cotton and for Different Insurance Rates

Per Bale Value of Cotton	Rate per \$100 Insurance		Type of Storage Contract					
			Old <u>1/</u>		October 14, 1941 <u>2/</u>		January 7, 1942 <u>3/</u>	
	per month	per year	Insurance costs	Storage revenue after insurance costs	Insurance costs	Storage revenue after insurance costs	Insurance costs	Storage revenue after insurance costs
	Cents	Dollars	Dollars per year	Dollars per year	Dollars per year	Dollars per year	Dollars per year	Dollars per year
\$50	1	\$0.12	\$0.06	\$1.74	\$0.06	\$1.44	\$0.06	\$1.74
	10	1.20	0.60	1.20	0.60	0.90	0.60	1.20
	20	2.40	1.20	0.60	1.20	0.30	1.20	0.60
\$75	1	0.12	0.09	1.71	0.06	1.44	0.06	1.74
	10	1.20	0.90	0.90	0.60	0.90	0.60	1.20
	20	2.40	1.80	0.00	1.20	0.30	1.20	0.60
\$100	1	0.12	0.12	1.68	0.06	1.44	0.06	1.74
	10	1.20	1.20	0.60	0.60	0.90	0.60	1.20
	20	2.40	2.40	-0.60	1.20	0.30	1.20	0.60

1/ This contract provides that the warehouseman must carry cotton fire insurance on the full market value of cotton. A storage rate of 15 cents per bale per month for flat cotton is allowed.

2/ In this contract the warehouseman must carry cotton fire insurance on a \$50 per bale valuation or market value whichever is lower. A storage rate of  $12\frac{1}{2}$  cents per bale per month for flat cotton is allowed.

3/ Before making returns to the warehouseman under this contract, the cost of cotton fire insurance on a \$50 per bale value is deducted by C.C.C. from the storage rate of 15 cents per bale per month allowed on flat cotton.

From the above table it can be seen that for all values of cotton in excess of \$50 per bale the amount of cotton fire insurance that the warehouseman has to pay on Government-owned and pooled loan cotton stored for C.C.C. is less under the October or January contracts than under the old contract. While the costs of cotton fire insurance to the warehouseman are the same under the October and January contracts, a storage rate of 15 cents per bale per month is allowed under the January contract as compared with only  $12\frac{1}{2}$  cents per bale per month



under the October contract. This means that the storage revenue to the warehouseman after his insurance costs are deducted is always higher under the January contract than under the October contract by 30 cents per bale per year for all values of cotton and for all insurance rates.

Storage returns after fire insurance costs have been deducted, however, are not always higher under the October contract than under the old contract. The reason for this is that a 15 cents per bale per month storage rate is allowed under the old contract as compared with  $12\frac{1}{2}$  cents per bale per month under the October contract which means that with low fire insurance rates and low cotton values it is more profitable for the warehouseman to use the old contract.

In summary, it is suggested that all cooperative warehouses storing Government-owned or pooled loan cotton use the January rather than the old or the October contract. Additional information on the provisions of these contracts and methods of transferring cotton from one to the other can be obtained by writing Commodity Credit Corporation, Masonic Temple Building, New Orleans, Louisiana.

In view of the new insurance arrangements discussed above, many of the statements made in the main text of this publication with reference to high insurance costs must be modified somewhat in the case of Government-owned and pooled loan cotton. Even in these cases, however, and in all other cases, the desirability of keeping fire insurance rates as low as possible must be emphasized again. Cotton fire insurance costs, even under the new storage contracts, still remain as an important item in total warehousing costs and every effort should be made to keep them low.





